Description of the AVT Modular Camera Concept

- In addition to a comprehensive offering of standard cameras, Allied Vision Technologies also offers customized cameras according to special requirements in customer application systems.
- Many of these special requirements can be covered by the **AVT Modular Camera Concept**.
- The **AVT Modular Camera Concept** provides a list of options to change the camera's form factor and optical filters.
- Using the **AVT Modular Camera Concept** is beneficial because all listed options:
  - avoid customizing effort
  - are ready to order
  - lead to quick delivery times
  - are priced transparently
- Have a look at the options of the **AVT Modular Camera Concept** on the following pages.
- Please note: The **minimum order size** of these options is **3 cameras**.

Technical and ordering information

Info

- **Technical information:**
  http://www.alliedvisiontec.com
- **Support:**
  support@alliedvisiontec.com

Allied Vision Technologies GmbH (Headquarters)
Taschenweg 2a
07646 Stadtroda, Germany
Tel: +49 36428-677-0
Fax: +49 36428-677-28
e-mail: info@alliedvisiontec.com

Allied Vision Technologies Inc.
38 Washington Street
Newburyport, MA 01950, USA
Toll Free number +1 877-USA-1394
Tel: +1 978-225-2030
Fax: +1 978-225-2029
e-mail: info@alliedvisiontec.com

Allied Vision Technologies Canada Inc.
101-3750 North Fraser Way
Burnaby, BC, V5J 5E9, Canada
Tel: +1 604-875-8855
Fax: +1 604-875-8856
e-mail: info@alliedvisiontec.com

Allied Vision Technologies Asia Pte. Ltd.
82 Playfair Road
#07-02 D'Lithium
Singapore 368001
Tel: +65 6634-9027
Fax: +65 6634-902
e-mail: info@alliedvisiontec.com

Contents

Modular concept for MARLIN 3
Modular concept for OSCAR 4
Modular concept PIKE (not F-1100/1600) 5
Modular concept PIKE F-1100/1600 6
Modular concept for GUPPY 7
Modular concept for Guppy PRO 8
Modular concept for STINGRAY 9
Modular concept for MANTA 10
Modular concept for Prosilica GX 11
Modular concept for Prosilica GE 12
Modular concept for Prosilica GS 13
Modular concept for Prosilica GB 14
Modular concept for Prosilica GC 15
Images and drawings MARLIN 16
Images and drawings OSCAR 17
Images and drawings PIKE 18
Images and drawings GUPPY 19
Images and drawings Guppy PRO 20
Images and drawings STINGRAY 21
Images and drawings MANTA 22
STINGRAY Compact 23
Copper and GOF connectors PIKE 24
Copper and GOF connectors STINGRAY 25
Lateral cable 26
Spectral transmission of filters 27
Sensor variants:
PIKE / Prosilica GX / Prosilica GE cameras 28
Defect pixel definitions: PIKE F-1100 / Prosilica GE4000
(Kodak KAI-11002 sensors) 29
Defect pixel definitions: PIKE F-1600 / Prosilica GE4900
(Kodak KAI-16000 sensors) 30
PIKE with Taped Cover Glass (TCG) 31
Sensor variant: STINGRAY cameras 32
How to order a Guppy / Stingray / Manta board level camera 33
Order a Guppy board level camera 34
Order a Stingray board level camera 36
Order a Manta board level camera 38

Modular concept for MARLIN

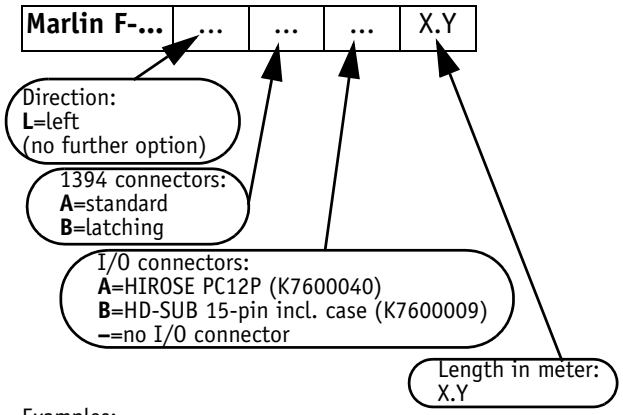
Module	Standard	Options	Order number / Order text	Additional costs	
Lens mount	C-Mount	• CS-Mount • F-Mount • M12-Mount (F-080 only)	• MARLIN F-... CS-Mount • MARLIN F-... Nikon F-Mount (Adapter, K0000335) • MARLIN F-... M12-Mount (Adapter, E3000115)		Pricing upon request
Angled head	Straight view	Angled head variant: • *MARLIN W90* on page 16 • *MARLIN W90 S90* on page 16 • *MARLIN W270* on page 16 • *MARLIN W270 S90* on page 16	• MARLIN F-... W90 • MARLIN F-... W90 S90 • MARLIN F-... W270 • MARLIN F-... W270 S90		
Optical filter	IR cut filter Jenofilt 217 ASG (F-131BNIR only)	• ASG (protection glass) • IRC BG39 (IR cut filter) • IRP RG715 (IR pass filter) • IRP RG830 (IR pass filter) *Spectral transmission of filters* on page 27	• MARLIN F-... ASG • MARLIN F-... IRC BG39 • MARLIN F-... IRP RG715 • MARLIN F-... IRP RG830		
Case design	AVT design	• *MARLIN medical design* on page 16	• MARLIN F-... medical		
Lateral cable	Rear connectors	Instead of connectors at the rear of the camera, cabling can be led laterally out of the case, equipped with selectable connectors. Cable exit: • *Lateral cable exit* on page 26 (exit to the left side) 1394: • *IEEE 1394 connector* on page 26 I/O: • *Input/output connector* on page 26: HIROSE 12-pin or HD-SUB 15-pin • - Length: • 1394 and I/O always have the same length and direction • 0.2 m ... 4.5 m (10 cm steps)	 Examples: L A A 2.1 Left exit/standard 1394 conn. HIROSE I/O connector/2.1 m L B – 1.4 Left exit/latching 1394 conn. no I/O connector/1.4 m		
HIROSE Power	Input	• Output	• MARLIN F-... PWR out		

Table 1: MARLIN options

Modular concept for OSCAR

Module	Standard	Options	Order number / Order text	Additional costs	
Lens mount	C-Mount	• F-Mount	• OSCAR F-... Nikon F-Mount (Adapter, K0000335)		Pricing upon request
Angled head	Straight view	Angled head variant: • *OSCAR W90* on page 17 • *OSCAR W90 S90* on page 17 • *OSCAR W270* on page 17 • *OSCAR W270 S90* on page 17	• OSCAR F-... W90 • OSCAR F-... W90 S90 • OSCAR F-... W270 • OSCAR F-... W270 S90		
Optical filter	IR cut filter Jenofilt 217	• ASG (protection glass) • IRC BG39 (IR cut filter) • IRP RG715 (IR pass filter) • IRP RG830 (IR pass filter) *Spectral transmission of filters* on page 27	• OSCAR F-... ASG • OSCAR F-... IRC BG39 • OSCAR F-... IRP RG715 • OSCAR F-... IRP RG830		
Case design	AVT design	• *OSCAR medical design* on page 17	• OSCAR F-... medical		
Lateral cable	Rear connectors	Instead of connectors at the rear of the camera, cabling can be led laterally out of the case, equipped with selectable connectors. Cable exit: • *Lateral cable exit* on page 26 (exit to the left/right/top/bottom side) 1394: • *IEEE 1394 connector* on page 26 I/O: • *Input/output connector* on page 26: HIROSE 12-pin or HD-SUB 15-pin • - Length: • 1394 and I/O always have the same length and direction • 0.2 m ... 4.5 m (10 cm steps)	Classification for order number: **Oscar F-...** | ... | ... | ... | X.Y Direction: **L**=left **R**=right **T**=top **B**=bottom 1394 connectors: **A**=standard **B**=latching I/O connectors: **A**=HIROSE PC12P (K7600040) **B**=HD-SUB 15-pin incl. case (K7600009) **–**=no I/O connector Length in meter: X.Y Examples: **L** | **A** | **A** | **2.1** — Left exit/standard 1394 conn. HIROSE I/O connector/2.1 m **L** | **B** | **–** | **1.4** — Left exit/latching 1394 conn. no I/O connector/1.4 m		
HIROSE Power	Input	• Output	• OSCAR F-... PWR out		

Table 2: OSCAR options

Modular concept PIKE (not F-1100/1600)

Module	Standard	Options	Order number / Order text	Additional costs	
Lens mount	C-Mount	• F-Mount • M39-Mount • CS-Mount • M12-Mount	• PIKE F-... Nikon F-Mount (Adapter, K0000335) • PIKE F-... M39-Mount • PIKE F-... CS-Mount • PIKE F-... M12-Mount (Adapter, E3000115)		Pricing upon request
Angled head	Straight view	Angled head variant: • *PIKE W90* on page 18 • *PIKE W90 S90* on page 18 • *PIKE W270* on page 18 • *PIKE W270 S90* on page 18	• PIKE F-... W90 • PIKE F-... W90 S90 • PIKE F-... W270 • PIKE F-... W270 S90		
Optical filter	Monochrome camera: ASG Color camera: IR cut filter Jenofilt 217	• ASG (protection glass) • IRC Jenofilt 217 (IR cut filter) • IRC BG39 (IR cut filter) • IRP RG715 (IR pass filter) • IRP RG830 (IR pass filter) *Spectral transmission of filters* on page 27	• PIKE F-... ASG • PIKE F-... IRC Jenofilt • PIKE F-... IRC BG39 • PIKE F-... IRP RG715 • PIKE F-... IRP RG830		
Sensor variants	Fixed cover glass, microlenses	*Sensor variants: PIKE / Prosilica GX / Prosilica GE cameras* on page 28	• PIKE F-... Order code (see *page 28*) Example: PIKE F-032B ABB-CP-AA		
Case design	AVT design	• *PIKE medical design* on page 18	• PIKE F-... medical		
Lateral cable	Rear connectors	**No options**			
HIROSE Power	Input	• Output	• PIKE F-... PWR out		
1394b connectors	2 x copper or 1 x GOF, 1 x Copper	*Copper and GOF connectors PIKE* on page 24	• PIKE F-... or • PIKE F-... fiber		

Table 3: PIKE options (without Pike F-1100/1600)

Modular concept PIKE F-1100/1600

Module	Standard	Options	Order number / Order text	Additional costs	
Lens mount	F-Mount	• M42-Mount • M58-Mount	• PIKE F-...M42-Mount • PIKE F-...M58-Mount		Pricing upon request
Angled head	Straight view	Angled head variant: • *PIKE W270* on page 18	• PIKE F-... W270		
Optical filter	Monochrome camera: ASG Color camera: IR cut filter Jenofilt 217	• ASG (protection glass) • IRC Jenofilt 217 (IR cut filter) • IRC Hoya C5000 (IR cut filter) *Spectral transmission of filters* on page 27	• PIKE F-... ASG • PIKE F-... IRC Jenofilt • PIKE F-... IRC Hoya		
Sensor variants	Fixed cover glass, microlenses	*Sensor variants: PIKE / Prosilica GX / Prosilica GE cameras* on page 28	• PIKE F-... Order code (see *page 29*) Example: PIKE F-1100B ABA-CD-B1		
Sensor quality	Class 2	• Class 1 • Class 0 (only for Pike F-1100B) (see *page 29* and *page 30*)	• PIKE F-... C1 • PIKE F-... C0		
Case design	AVT design	• *PIKE medical design* on page 18	• PIKE F-... medical		
Lateral cable	Rear connectors	**No options**			
HIROSE Power	Input	• Output	• PIKE F-... PWR out		
1394b connectors	2 x copper or 1 x GOF, 1 x Copper	*Copper and GOF connectors PIKE* on page 24	• PIKE F-... or • PIKE F-... fiber		

Table 4: PIKE F-1100/1600 options

Modular concept for GUPPY

Module	Standard	Options	Order number / Order text	Additional costs	
Lens mount	C-Mount	• CS-Mount • F-Mount • M12-Mount	• GUPPY F-... CS-Mount • GUPPY F-... Nikon F-Mount (Adapter, K0000335) • GUPPY F-... M12-Mount (Adapter, E3000115)		Pricing upon request
Optical filter	Monochrome camera: ASG Color camera: IRC Jenofilt 217	• ASG (protection glass) • IRC Jenofilt 217 (IR cut filter) • IRC BG39 (IR cut filter) • IRP RG715 (IR pass filter) • IRP RG830 (IR pass filter) *Spectral transmission of filters* on page 27	• GUPPY F-... ASG • GUPPY F-... IRC Jenofilt • GUPPY F-... IRC BG39 • GUPPY F-... IRP RG715 • GUPPY F-... IRP RG830		
Case design	AVT design	Guppy Medical Design • *GUPPY medical design* on page 19			
HIROSE Power	Input	• Output	• GUPPY F-... PWR out		
Board level		*Order a Guppy board level camera* on page 34	• GUPPY F-... BL		

Table 5: GUPPY options

Modular concept for Guppy PRO

Module	Standard	Options	Order number / Order text	Additional costs	
Lens mount	C-Mount	• CS-Mount	• Guppy PRO F-... CS-Mount		Pricing upon request
Optical filter	Monochrome camera: ASG Color camera: IRC Hoya C5000	• ASG (protection glass) • IRC Jenofilt 217 (IR cut filter) • IRC Hoya C5000 (IR cut filter) • IRC BG39 (IR cut filter) • IRP RG715 (IR pass filter) • IRP RG830 (IR pass filter) *Spectral transmission of filters* on page 27	• Guppy PRO F-... ASG • Guppy PRO F-... IRC Jenofilt • Guppy PRO F-... IRC Hoya • Guppy PRO F-... IRC BG39 • Guppy PRO F-... IRP RG715 • Guppy PRO F-... IRP RG830		
Case design	AVT design	Guppy PRO Medical Design • *Guppy PRO medical design* on page 20	• Guppy PRO F-... medical		
HIROSE Power	Input	• Output	• Guppy PRO F-... PWR out		
Board level		Details on request	• Guppy PRO F-... BL		

Table 6: Guppy PRO options

Modular concept for STINGRAY

Module	Standard	Options	Order number / Order text	Additional costs	
Lens mount	C-Mount	• F-Mount • CS-Mount • M12-Mount	• STINGRAY F-... Nikon F-Mount (Adapter, K0000335) • STINGRAY F-... CS-Mount • STINGRAY F-... M12-Mount (Adapter, E3000115)		Pricing upon request
Angled head	Straight view	Angled head variant: • *STINGRAY W90* on page 21 • *STINGRAY W90 S90* on page 21 • *STINGRAY W270* on page 21 • *STINGRAY W270 S90* on page 21	• STINGRAY F-... W90 • STINGRAY F-... W90 S90 • STINGRAY F-... W270 • STINGRAY F-... W270 S90		
Housing variant	Standard dimensions Cable exit on back	• *STINGRAY Compact* on page 23 Cable exit on bottom **Please note: No angled heads. No fiber option.**	• STINGRAY F-... compact		
Optical filter	Monochrome camera: ASG Color camera: IR cut filter Hoya C5000	• ASG (protection glass) • IRC Jenofilt 217 (IR cut filter) • IRC Hoya C5000 (IR cut filter) • IRC BG39 (IR cut filter) • IRP RG715 (IR pass filter) • IRP RG830 (IR pass filter) *Spectral transmission of filters* on page 27	• STINGRAY F-... ASG • STINGRAY F-... IRC Jenofilt • STINGRAY F-... IRC Hoya • STINGRAY F-... IRC BG39 • STINGRAY F-... IRP RG715 • STINGRAY F-... IRP RG830		
Case design	AVT design	• *STINGRAY medical design* on page 21	• STINGRAY F-... medical		
Lateral cable	Rear connectors	**No options**			
HIROSE Power	Input	• Output	• STINGRAY F-... PWR out		
1394b connectors	2 x copper or 1 x GOF, 1 x Copper	*Copper and GOF connectors STINGRAY* on page 25	• STINGRAY F-... or • STINGRAY F-... fiber		
Sensor variant	Fixed cover glass, microlenses	• Removed cover glass, microlenses (only ICX285: Stingray F-145B/C) *Sensor variant: STINGRAY and MANTA cameras* on page 32	• STINGRAY F-... RCG (**R**emoved **C**over **G**lass)		
Board level		*Order a Stingray board level camera* on page 36	• STINGRAY F-... BL		

Table 7: STINGRAY options

Modular concept for MANTA

Module	Standard	Options	Order number / Order text	Additional costs	
Lens mount	C-Mount	• CS-Mount • M12-Mount	• MANTA G-... CS-Mount • MANTA G-... M12-Mount		Pricing upon request
Angled head	Straight view	Angled head variant: • *MANTA W90* on page 22 • *MANTA W90 S90* on page 22 • *MANTA W270* on page 22 • *MANTA W270 S90* on page 22	• MANTA G-... W90 • MANTA G-... W90 S90 • MANTA G-... W270 • MANTA G-... W270 S90		
Optical filter	Monochrome camera: ASG Color camera: IR cut filter Hoya C5000	• ASG (protection glass) • IRC Jenofilt 217 (IR cut filter) • IRC Hoya C5000 (IR cut filter) • IRC BG39 (IR cut filter) • IRP RG715 (IR pass filter) • IRP RG830 (IR pass filter) *Spectral transmission of filters* on page 27	• MANTA G-... ASG • MANTA G-... IRC Jenofilt • MANTA G-... IRC Hoya • MANTA G-... IRC BG39 • MANTA G-... IRP RG715 • MANTA G-... IRP RG830		
Case design	AVT design	• *MANTA medical design* on page 22	• MANTA G-... medical		
Sensor variant	Fixed cover glass, microlenses	• Removed cover glass, microlenses (only for cameras with ICX285: Manta G-145B/C and Manta G-145B/C-30fps) *Sensor variant: STINGRAY and MANTA cameras* on page 32	• MANTA G-... RCG (**R**emoved **C**over **G**lass)		
Board level		*Order a Manta board level camera* on page 38	• MANTA G-... BL		
Power over Ethernet (PoE)	Without PoE	• PoE (Remark: no minimum order quantity)	• MANTA G-... PoE		

Table 8: MANTA options

Modular concept for Prosilica GX

Module	Standard	Options	Order number / Order text	Additional costs	
Lens mount	C-Mount (except GX3300: F-Mount)	• CS-Mount (not applicable for type 2/3 sensors and larger) • C-Mount (for GX3300) • F-Mount	• Prosilica GX....-01 • Prosilica GX....-07 • Prosilica GX....-03		Pricing upon request
Optical filter	Monochrome camera: no filter	• IRC30 Sunex (IR cut filter)	• Prosilica GX....-06		
Mount adapter	No adapter	• EF-Mount adapter	• Prosilica GX....-09		
Sensor variant	Fixed cover glass, microlenses	• Taped cover glass, microlenses • Taped cover glass, no microlenses Check availability: *Sensor variants: PIKE / Prosilica GX / Prosilica GE cameras* on page 28	• Prosilica GX....-02 • Prosilica GX....-04		

Table 9: Prosilica GX options

Modular concept for Prosilica GE

Module	Standard	Options	Order number / Order text	Additional costs	
Lens mount	C-Mount (except GE4000/ GE4900: F-Mount)	• CS-Mount (not applicable for type 2/3 sensors and larger) • F-Mount	• Prosilica GE....-01 • Prosilica GE....-03		Pricing upon request
Optical filter	Monochrome camera: no filter	• IRC30 Sunex (IR cut filter)	• Prosilica GE....-06		
Mount adapter	No adapter	• EF-Mount adapter (only for GE4000 and GE4900)	• Prosilica GE....-09		
Sensor variant	Fixed cover glass, microlenses	• Taped cover glass, microlenses • Taped cover glass, no microlenses Check availability: *Sensor variants: PIKE / Prosilica GX / Prosilica GE cameras* on page 28	• Prosilica GE....-02 • Prosilica GE....-04		
Sensor quality	Class 2	• Class 1 (only for GE4000/C, GE4900/C) • Class 0 (only for GE4000) Check availability: *Sensor variants: PIKE / Prosilica GX / Prosilica GE cameras* on page 28	• Prosilica GE....-C1 • Prosilica GE....-C0		

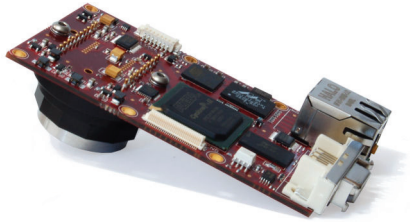
Table 10: Prosilica GE options

Modular concept for Prosilica GS

Module	Standard	Options	Order number / Order text	Additional costs	
Lens mount	C-Mount	• CS-Mount (not applicable for type 2/3 sensors and larger)	• Prosilica GS....-01		Pricing upon request
Optical filter	Monochrome camera: no filter	• IRC30 Sunex (IR cut filter)	• Prosilica GS....-06		
Case design	AVT design	• Prosilica GS medical design	• Prosilica GS....-10		

Table 11: Prosilica GS options

Modular concept for Prosilica GB



Module	Standard	Options	Order number / Order text	Additional costs	
Lens mount	C-Mount	• CS-Mount (not applicable for type 2/3 sensors and larger)	• Prosilica GB....-01		Pricing upon request
Optical filter	Monochrome camera: no filter	• IRC30 Sunex (IR cut filter)	• Prosilica GB....-06		

Table 12: Prosilica GB options

Modular concept for Prosilica GC

Module	Standard	Options	Order number / Order text	Additional costs	
Lens mount	C-Mount	• CS-Mount (not applicable for type 2/3 sensors and larger)	• Prosilica GC....-01		Pricing upon request
Optical filter	Monochrome camera: no filter	• IRC30 Sunex (IR cut filter)	• Prosilica GC....-06		

Table 13: Prosilica GC options

Images and drawings MARLIN

Angled head versions (position of sensor)

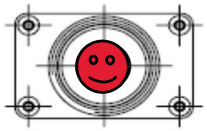
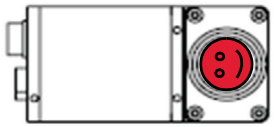
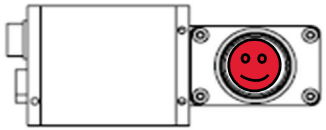
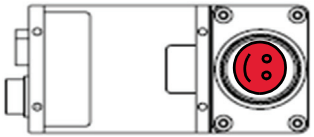
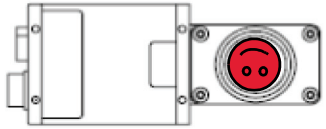
MARLIN standard	MARLIN W90	MARLIN W90 S90	MARLIN W270	MARLIN W270 S90
				
Front view into sensor	Top view into sensor	Top view into sensor	Bottom view into sensor	Bottom view into sensor

Table 14: MARLIN: sensor position of angled head versions

Case design

MARLIN medical design

Table 15: MARLIN medical design

Images and drawings OSCAR

Angled head versions (position of sensor)

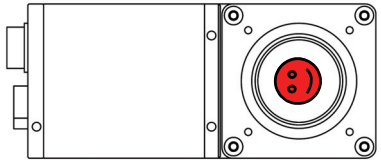
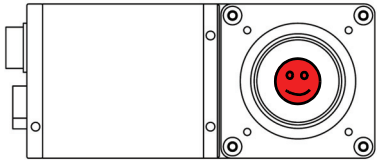
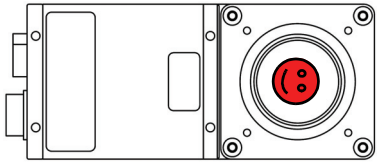
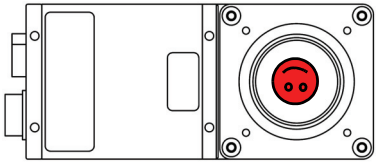
OSCAR standard	OSCAR W90	OSCAR W90 S90	OSCAR W270	OSCAR W270 S90
Front view into sensor	 Top view into sensor	 Top view into sensor	 Bottom view into sensor	 Bottom view into sensor

Table 16: OSCAR: sensor position of angled head versions

Case design

OSCAR medical design

Table 17: OSCAR medical design

Images and drawings PIKE

Angled head versions (position of sensor)

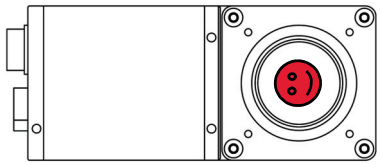
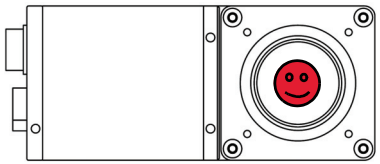
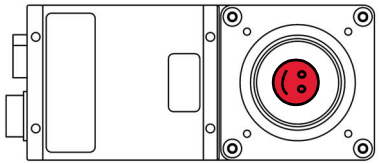
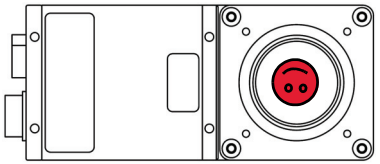
PIKE standard	PIKE W90 (not Pike F-1100/1600)	PIKE W90 S90 (not Pike F-1100/1600)	PIKE W270 (also Pike F-1100/1600)	PIKE W270 S90 (not Pike F-1100/1600)
Front view into sensor	 Top view into sensor	 Top view into sensor	 Bottom view into sensor	 Bottom view into sensor

Table 18: PIKE: sensor position of angled head versions (drawings only schematic!)

Case design

PIKE medical design
///ALLIED Vision Technologies MEDICAL

Table 19: PIKE medical design

Images and drawings GUPPY

Case design

GUPPY medical design	

Table 20: GUPPY medical design

Images and drawings Guppy PRO

Case design

Guppy PRO medical design

Table 21: Guppy PRO medical design

Images and drawings STINGRAY

Angled head versions (position of sensor)

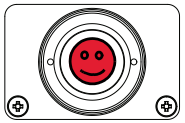
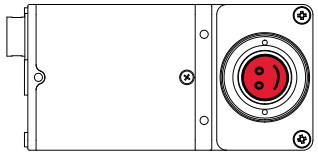
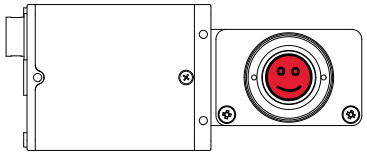
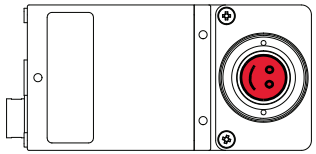
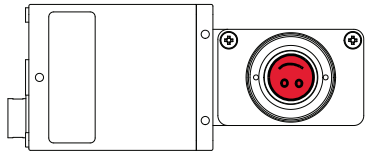
STINGRAY standard	STINGRAY W90	STINGRAY W90 S90	STINGRAY W270	STINGRAY W270 S90
				
Front view into sensor	Top view into sensor	Top view into sensor	Bottom view into sensor	Bottom view into sensor

Table 22: STINGRAY: sensor position of angled head versions

Case design

STINGRAY medical design	
///ALLIED Vision Technologies MEDICAL	

Table 23: STINGRAY medical design

Images and drawings MANTA

Angled head versions (position of sensor)

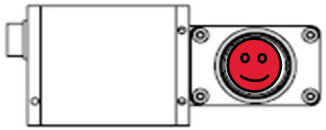
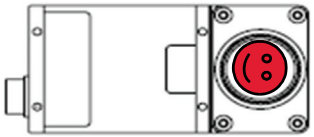
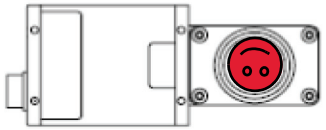
MANTA standard	MANTA W90	MANTA W90 S90	MANTA W270	MANTA W270 S90
				
Front view into sensor	Top view into sensor	Top view into sensor	Bottom view into sensor	Bottom view into sensor

Table 24: MANTA: sensor position of angled head versions (drawings only schematic!)

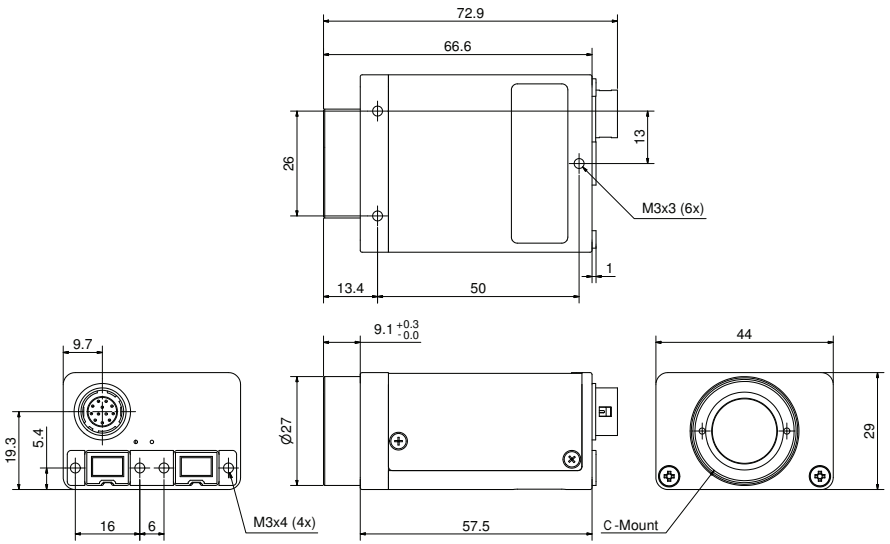
Case design

MANTA medical design	
///ALLIED Vision Technologies MEDICAL	

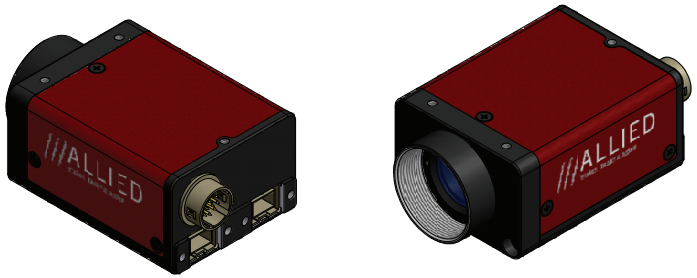
Table 25: MANTA medical design

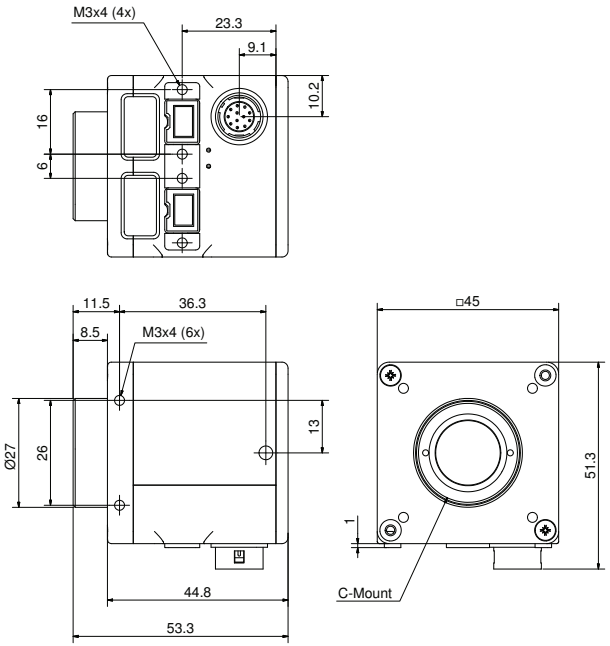
STINGRAY Compact

STINGRAY standard housing	STINGRAY Compact housing



Stingray (2x IEEE 1394b)
72.9 x 44 x 29 (L x W x H)





Stingray Compact (2x IEEE 1394b)
53.3 x 45 x 51.3 (L x W x H)

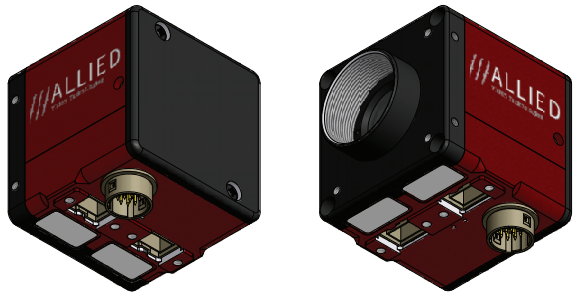


Table 26: STINGRAY standard compared to compact housing

Copper and GOF connectors PIKE

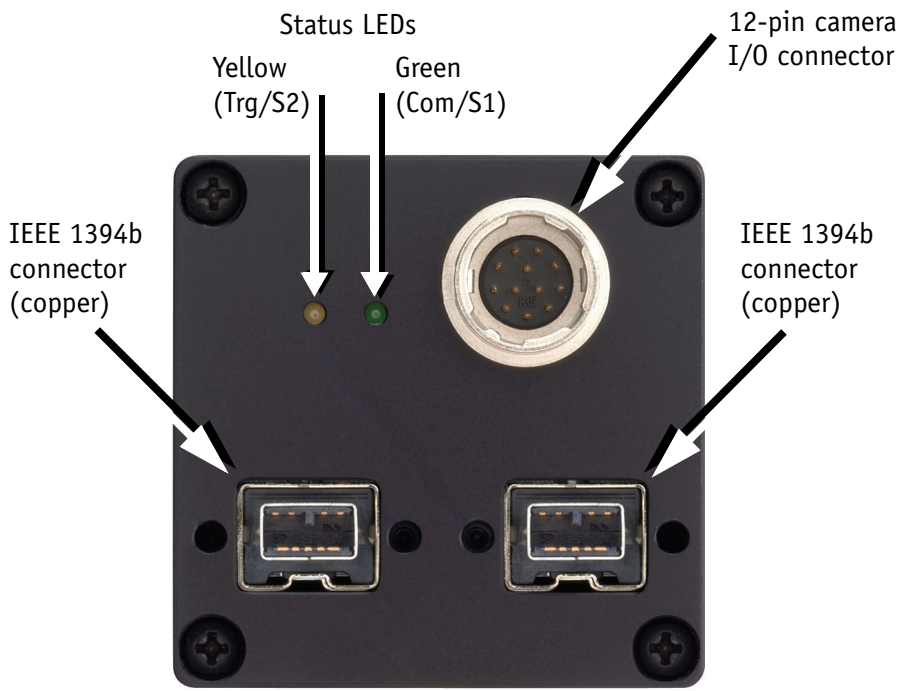
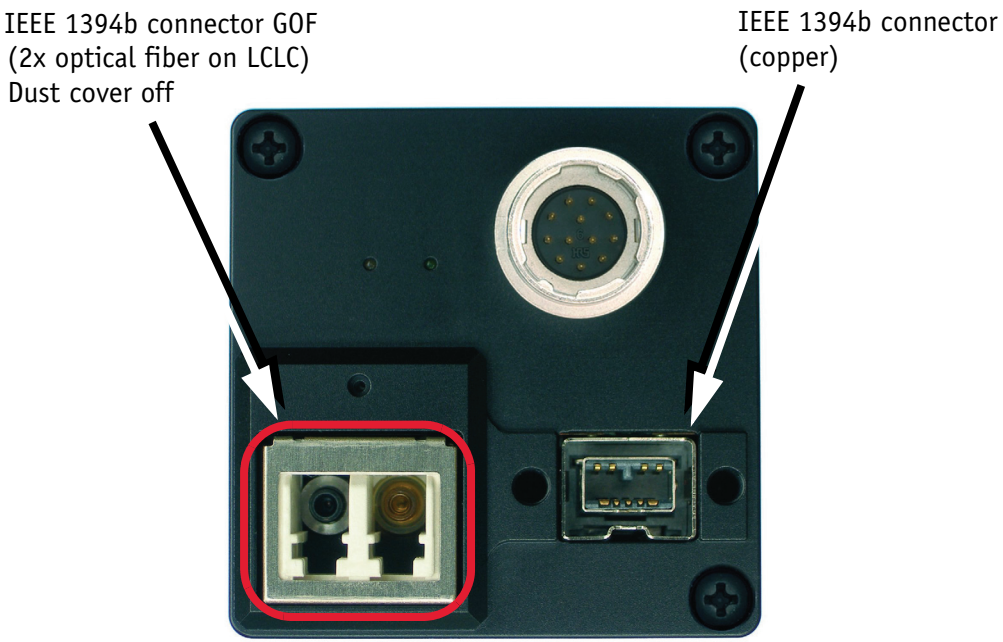
PIKE (2x 1394b copper)	PIKE (1394b: 1 x GOF, 1 x copper)
	

Table 27: PIKE: rear views of cameras

Copper and GOF connectors STINGRAY

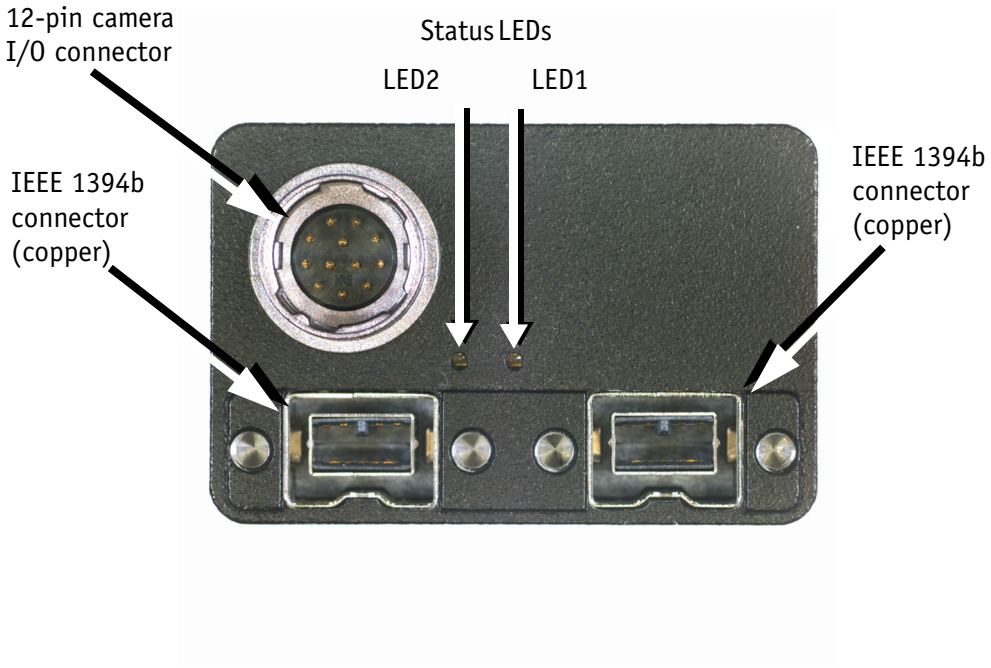
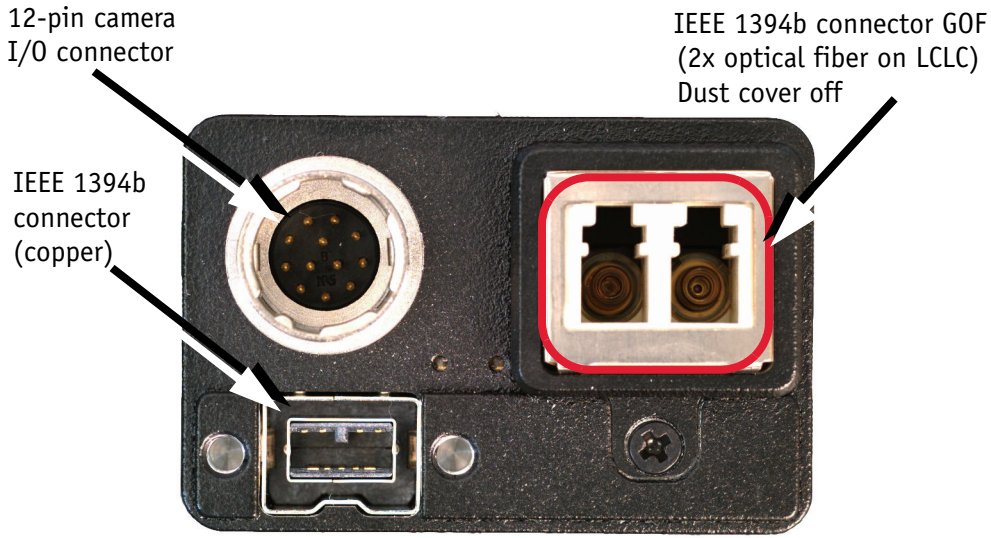
STINGRAY (2x 1394b copper)	STINGRAY (1394b: 1 x GOF, 1 x copper)
	

Table 28: STINGRAY: rear views of cameras

Lateral cable

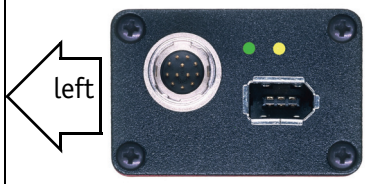
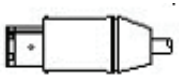
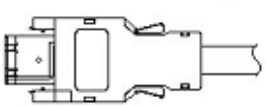
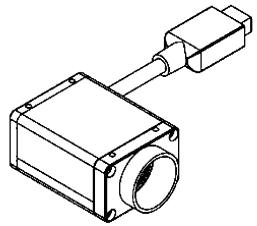
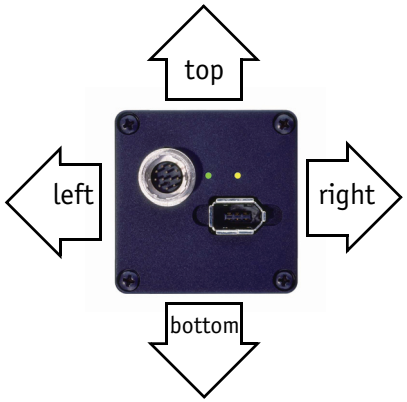
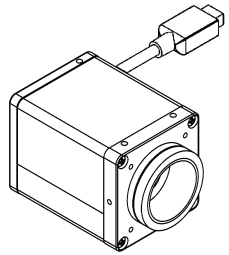
Lateral cable exit	IEEE 1394 connector		Input/output connector		Illustration
 **MARLIN** (exit to the left)					 **MARLIN** with cable exit to the **left**
 **OSCAR** (exit to the left/right/top/bottom)	standard connector	latching connector	HIROSE 12-pin (socket contact)	HD-SUB 15-pin (pin contact)	 **OSCAR** with cable exit to the **left**

Table 29: Lateral cable options

Spectral transmission of filters

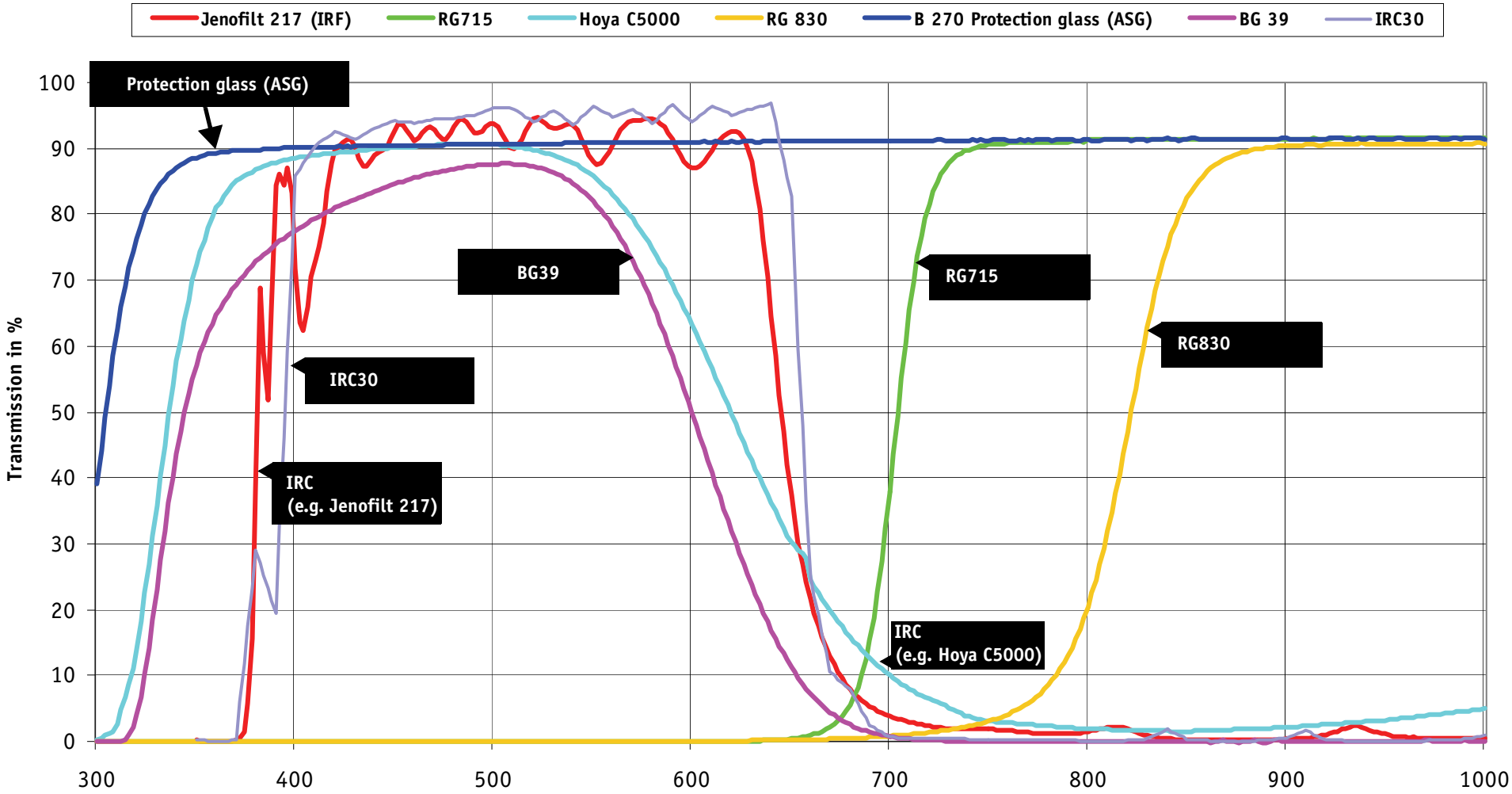


Figure 1: Spectral transmission of filters (exemplary curves)

Sensor variants: PIKE / Prosilica GX / Prosilica GE cameras

Info Please contact Customer Care for lead time and minimum order quantities.

				FIXED glass WITH microlenses			FIXED glass NO microlenses		TAPED glass WITH microlenses		TAPED glass NO microlenses		QUARTZ glass WITH microlenses	QUARTZ glass NO microlenses
AVT camera family	AVT camera model	Standard sensor	Sensor type	Order code of sensor variants										
				Class 2	Class 1	Class 0	Class 2	Class 1	Class 2	Class 1	Class 2	Class 1	Class 2	Class 2
PIKE	Pike F-032B	KAI-0340	Mono	Standard	-	-	-	-	ABB-CP-AA	-	AAA-CP-AA	-	-	AAA-CF-AA[1]
	Pike F-210B	KAI-2093	Mono	Standard	ABA-CB-B1	-	-	-	ABA-CP-BA	-	AAA-CP-BA	-	ABA-CK-BA	-
	Pike F-421B	KAI-04022	Mono	Standard	-	-	-	-	ABA-CR-BA	-	AAA-CR-BA	-	-	-
	Pike F-421C	KAI-04022	Color	Standard	-	-	-	-	CBA-CR-BA	-	-	-	-	-
	Pike F-1100B	KAI-11002	Mono	Standard	ABA-CD-B1	ABA-CD-B0	-	-	ABA-CR-B2	ABA-CR-B1	AAA-CR-B2	AAA-CR-B1	-	-
	Pike F-1100C	KAI-11002	Color	Standard	CBA-CD-B1	-	CAA-CD-B2	CAA-CD-B1	-	-	-	-	-	-
	Pike F-1600B	KAI-16000	Mono	Standard	AXA-JD-B1	-	AAA-JD-B2	AAA-JD-B1	AXA-JR-B2	AXA-JR-B1	AAA-JR-B2	AAA-JR-B1	-	-
	Pike F-1600C	KAI-16000	Color	Standard	CXA-JD-B1	-	-	-	-	-	-	-	-	-
Prosilica GX	GX1660	KAI-02050	Mono	Standard	-	-	-	-	ABA-JR-BA	-	AAA-JR-BA	-	-	-
	GX1910	KAI-02150	Mono	Standard	-	-	-	-	ABA-JR-BA	-	AAA-JR-BA	-	-	-
	GX2300	KAI-04050	Mono	Standard	-	-	-	-	ABA-JR-BA	-	AAA-JR-BA	-	-	-
	GX3300	KAI-08050	Mono	Standard	-	-	-	-	ABA-JR-BA	-	AAA-JR-BA	-	-	-
Prosilica GE	GE680	KAI-0340	Mono	Standard	-	-	-	-	ABB-CP-AA	-	AAA-CP-AA	-	-	AAA-CF-AA[1]
	GE1650	KAI-2020	Mono	Standard	-	-	-	-	ABA-CR-BA	-	AAA-CR-BA	-	-	AAA-CF-BA
	GE1650C	KAI-2020	Color	Standard	-	-	CBA-CD-BA	-	-	-	-	-	-	-
	GE1660	KAI-02050	Mono	Standard	-	-	-	-	ABA-JD-BA	-	AAA-JR-BA	-	-	-
	GE1900	KAI-2093	Mono	Standard	ABA-CB-B1	-	-	-	ABA-CP-BA	-	AAA-CP-BA	-	ABA-CK-BA	-
	GE1910	KAI-02150	Mono	Standard	-	-	-	-	ABA-JR-BA	-	AAA-JR-BA	-	-	-
	GE2040	KAI-04022	Mono	Standard	-	-	-	-	ABA-CR-BA	-	AAA-CR-BA	-	-	-
	GE2040C	KAI-04022	Color	Standard	-	-	-	-	CBA-CR-BA	-	-	-	-	-
	GE4000	KAI-11002	Mono	Standard	ABA-CD-B1	ABA-CD-B0	-	-	ABA-CR-B2	ABA-CR-B1	AAA-CR-B2	AAA-CR-B1	-	-
	GE4000C	KAI-11002	Color	Standard	CBA-CD-B1	-	CAA-CD-B2	CAA-CD-B1	-	-	-	-	-	-
	GE4900	KAI-16000	Mono	Standard	AXA-JD-B1	-	AAA-JD-B2	AAA-JD-B1	AXA-JR-B2	AXA-JR-B1	AAA-JR-B2	AAA-JR-B1	-	-
	GE4900C	KAI-16000	Color	Standard	CXA-JD-B1	-	-	-	-	-	-	-	-	-

Table 30: Order codes of sensor variants: PIKE / Prosilica GX / Prosilica GE cameras

[1] Minimum order quantity: 25 pieces

Example: Pike F-421B, sensor variant: Taped cover glass, no microlenses ⇨ Order code = Pike F-421B **AAA-CR-BA**

Defect pixel definitions: PIKE F-1100 / Prosilica GE4000 (Kodak KAI-11002 sensors)

Description	Definition	Class X	Class 0	Class 1	Class 2	Class 2	Notes
		Monochrome with microlens only	Monochrome with microlens only		Color only	Monochrome only	
Major dark field defect pixel	Defect ≥ 239 mV	100	100	100	200	200	1,2
Major bright field defect pixel	Defect ≥ 15%						1,2
Minor dark field defect pixel	Defect ≥ 123 mV	1000	1000	1000	2000	2000	1,2
Cluster defect	A group of 2 to N contiguous major defect pixels, but no more than W adjacent defects horizontally.	0	1 N=10 W=3	20 N=10 W=3	20 N=10 W=3	20 N=12 W=5	1,2
Column defect	A group of more than 10 contiguous major defect pixels along a single column.	0	0	0	10	2	1,2

Table 31: Defect pixel definitions: PIKE F-1100 / Prosilica GE4000 (Kodak KAI-11002 sensors)

[1] There will be at least two non-defect pixels separating any two major defect pixels.
[2] Tested at 27°C and 40°C.

Class X sensors are offered strictly *as available*. Kodak cannot guarantee delivery dates. Please call for availability.

Defect pixel definitions: PIKE F-1600 / Prosilica GE4900 (Kodak KAI-16000 sensors)

Description	Definition	Class 1	Class 2	Class 2	Notes	Test
			Monochrome only	Color only		
Major dark field defect pixel	Defect ≥ 245 mV	150	300	300	2	2
Major bright field defect pixel	Defect ≥ 15%					3
Minor dark field defect pixel	Defect ≥ 126 mV	1500	3000	3000	3	
Cluster defect	A group of 2 to N contiguous major defect pixels, but no more than W adjacent defects horizontally.	30 N=20 W=4	30 N=20 W=4	30 N=20 W=4	1,2	
Column defect	A group of more than 10 contiguous major defect pixels along a single column.	0	4	15	1,2	

Table 32: Defect pixel definitions: PIKE F-1600 / Prosilica GE4900 (Kodak KAI-16000 sensors)

[1] There will be at least two non-defect pixels separating any two major defect pixels.
[2] Tested at 27°C and 40°C.
[3] Tested at 40° C

PIKE with Taped Cover Glass (TCG)

PIKE with Taped Cover Glass (TCG) sensor variant	
Note	• This camera model includes a sensor with taped cover glass. • As protection in shipment a special tape to fix the sensor glass is used, tape and sensor glass have to be removed before using the camera. • We recommend removing the tape and the sensor glass in a dust-free environment: Without glass cover the sensor is mechanically very sensitive and has to be protected very carefully against humidity and dust.
Warranty precaution	AVT does not warranty against any damage to the sensor as soon as the tape is removed.

Table 33: PIKE TCG sensors: Note and warranty precaution

Sensor variant: STINGRAY and MANTA cameras

Removed Cover Glass (RCG)

Sensors with removed cover glass are suitable for several applications like laser beam profiling or where fiber optics are put directly on the CCD sensor.

Since the removal of the cover glass is not carried out by the sensor manufacturer himself but by a service provider AVT uses the term **Removed Cover Glass (RCG)** for this Stingray and Manta modular concept option.

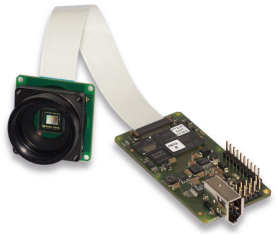
Quality requirements	Note and warranty precaution
AVT cameras including sensors with removed cover glass comply* with the following quality requirements: • The original sensor glass is completely removed. • There are no damaged or defect pixels / rows or columns. • Good dust level is defined as follows: **Less than 15 dark dust spots (up to 4 adjacent pixels, more than 50% darker than standard level)** **Less than 15 bright dust spots (up to 4 adjacent pixels, more than 20% darker than standard level)** **No dust spot with more than 4 adjacent pixels** * Stated compliance standards are as-verified prior to packaging and shipping. RCG cameras have the standard 2 year warranty on electronics (besides sensor), but no warranty can be offered on the sensor itself.	**Note** • This camera model includes a sensor with removed glass cover. • As protection in shipment a special adhesive foil is used, which has to be removed before using the camera. • We recommend removing the adhesive foil in a dust-free environment: Without glass cover the sensor is mechanically very sensitive and has to be protected very carefully against humidity and dust. **Warranty precaution** AVT does not warranty against any damage to the sensor as soon as the adhesive foil is removed.

Table 34: STINGRAY and MANTA RCG sensors: Quality requirements, note and warranty precaution

How to order a Guppy / Stingray / Manta board level camera

- In addition to a comprehensive offering of standard cameras, **Allied Vision Technologies** also offers customized cameras according to special requirements in customer application systems.
- Some of these special requirements are covered by the **Board Level Camera Modular Concept** for Guppy / Stingray / Manta.
- The **Board Level Camera Modular Concept** provides a list of items (camera, flex cable, lens mount etc.) to order an individual Guppy / Stingray / Manta board level camera.
- Using the **Board Level Camera Modular Concept** is beneficial because:
  - the ordering system avoids customizing effort
  - all listed items are ready to order
  - the ordering system leads to quick delivery times
  - all prices are transparent
- Have a look at the steps how to order a Guppy / Stingray / Manta board level camera on the following pages.

Order a Guppy board level camera



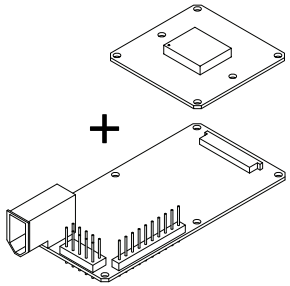
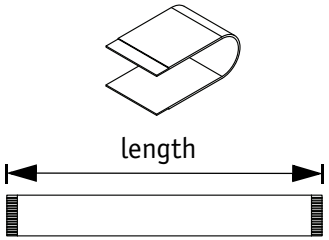
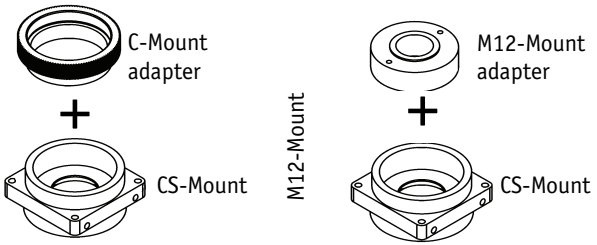
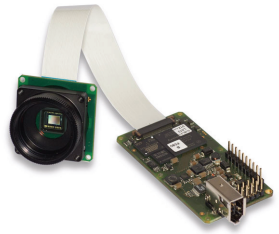
1. Select the camera type...		2. Select the lens mount and filter...
 Camera type is: sensor board + main board (without flex cable)	 length + flex cable	 C-Mount M12-Mount Choose between these 2 mounting types.
• Guppy F-033B_BL E0001012 • Guppy F-033C_BL E0001013 • Guppy F-080B_BL E0001015 • Guppy F-080C_BL E0001014	• Flex cable 120 mm K7500140 **Info** **Flex cables are not sold separately!**	• C-Mount • M12-Mount **Order each mount with one of the following built-in filters** (see *Figure 1: Spectral transmission of filters (exemplary curves)* on page 27): • ASG (protection glass) • IRC Jenofilt 217 (IR cut filter) • IRC Edmund Optics (IR cut filter) • IRC Hoya C5000 (IR cut filter) • IRC BG39 (IR cut filter) • IRP RG715 (IR pass filter) • IRP RG830 (IR pass filter)

Table 35: Order a Guppy board level camera (steps 1-2)

Order a Guppy board level camera



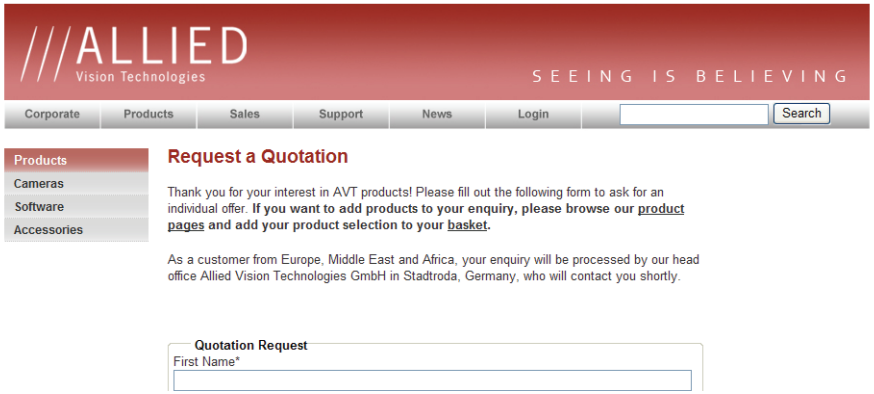
3. Select the 1394a cable...	4. Contact AVT...
 1394a cable (6-pin to 6-pin)	AVT contact web site: http://www.alliedvisiontec.com/emea/products/basket/request-a-quotation.html 
• 1394a cable, 6-pin to 6-pin, 0.5 m K1200071 • 1394a cable, 6-pin to 6-pin, 1.0 m K1200096 • 1394a cable, 6-pin to 6-pin, 2.0 m K1200063 • 1394a cable, 6-pin to 6-pin, 3.0 m K1200078 Please find **more cables and accessories** in our **web shop** at http://www.alliedvisiontec.com/emea/products/accessories.html	See contact information on page 1. **Order:** 1. Camera type (E-number ...) 2. Flex cable (K-number ...) 3. Mounting type (optional) (Name) 4. 1394a cable (optional) (K-number ...)

Table 36: Order a Guppy board level camera (steps 3-4)

Order a Stingray board level camera

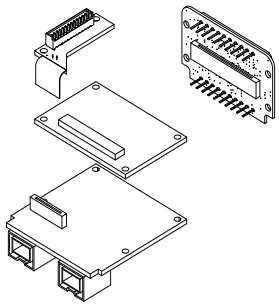
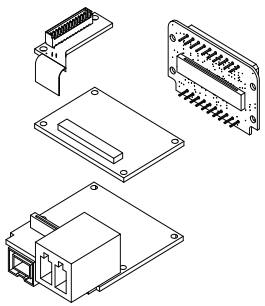
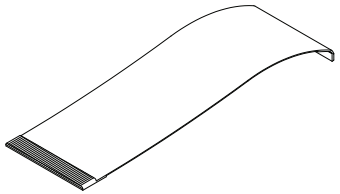
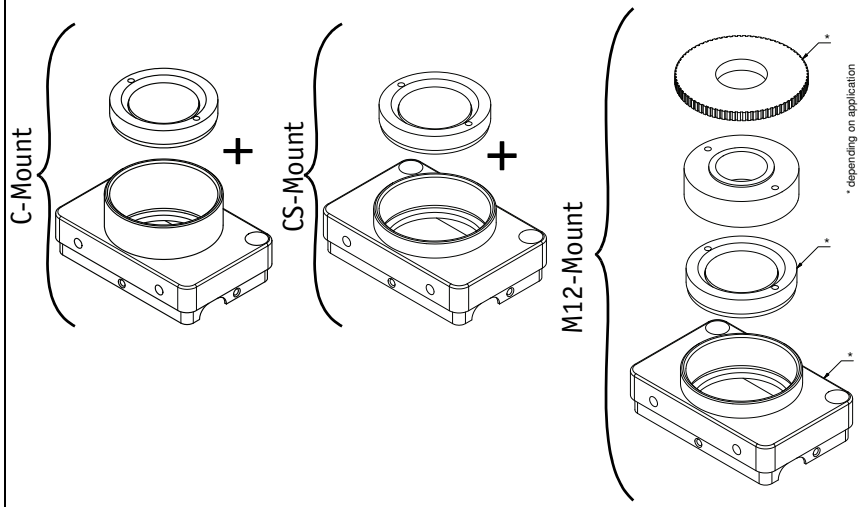
1. Select the camera type ...		2. Select the flex cable ...	3. Select the lens mount and filter ...
 2 x 1394b copper **or**  1 x 1394b copper 1 x 1394b GOF Camera type is: sensor board + 2 main boards + 13-pole connector		 length + flex cable	 C-Mount CS-Mount M12-Mount * depending on application Choose between these 3 mounting types. Each mounting type has: • built-in filter or • protection glass
• Stingray F-...._BL or	• Stingray F-...._BL fiber	• Flex cable 56 mm K7500307 • Flex cable 110 mm K7500318 **Info** **Flex cables are not sold separately!**	• C-Mount • CS-Mount • M12-Mount • Order each mount with one of the following built-in filters (see *Figure 1: Spectral transmission of filters (exemplary curves)* on page 27): • ASG (protection glass) • IRC Jenofilt 217 (IR cut filter) • IRC Hoya C5000 (IR cut filter) • IRC BG39 (IR cut filter) • IRP RG715 (IR pass filter) • IRP RG830 (IR pass filter)

Table 37: Order a Stingray board level camera (steps 1-3)

Order a Stingray board level camera

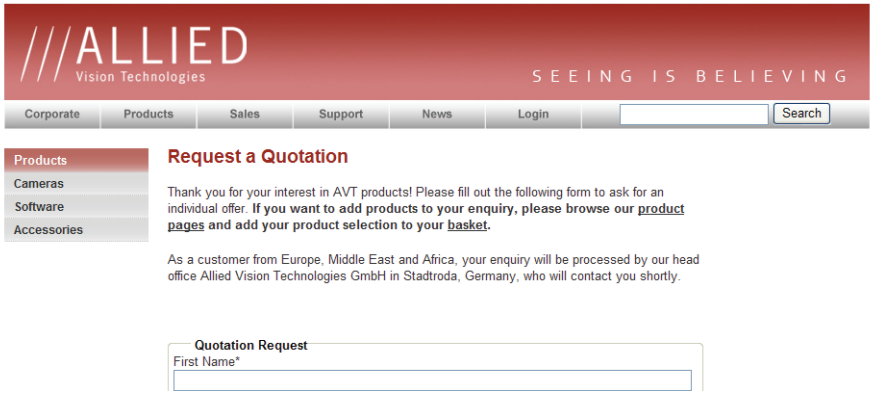
4. Select the 1394 cabling (1394b + I/O) ...	5. Contact AVT...
1394b cable screw lock (9-pin to 9-pin) I/O cable (13-pin to open end)	AVT contact web site: http://www.alliedvisiontec.com/emea/products/basket/request-a-quotation.html 
1394b cable: • 1394b cable, 9-pin screw lock to 9-pin screw lock 5.0 m K1200169 • 1394b cable, 9-pin screw lock to 6-pin standard 4.5 m K1200288 **I/O cable:** • I/O cable, 13-pin to open end 3.0 m K1200301 • I/O cable, 13-pin to open end 5.0 m K1200302 Please find **more cables and accessories** in our **web shop** at http://www.alliedvisiontec.com/emea/products/accessories.html	See contact information on page 1. **Order:** 1. Camera type 2. Flex cable (K-number ...) 3. Mounting type (optional) (Name) 4. 1394b cable and I/O cable (optional) (K-number ...)

Table 38: Order a Stingray board level camera (steps 4-5)

Order a Manta board level camera

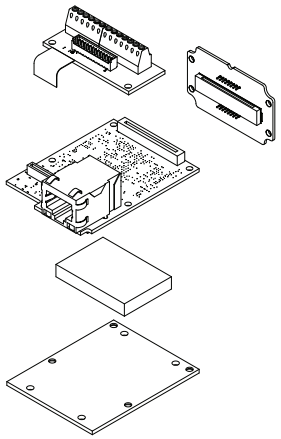
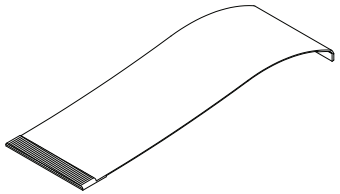
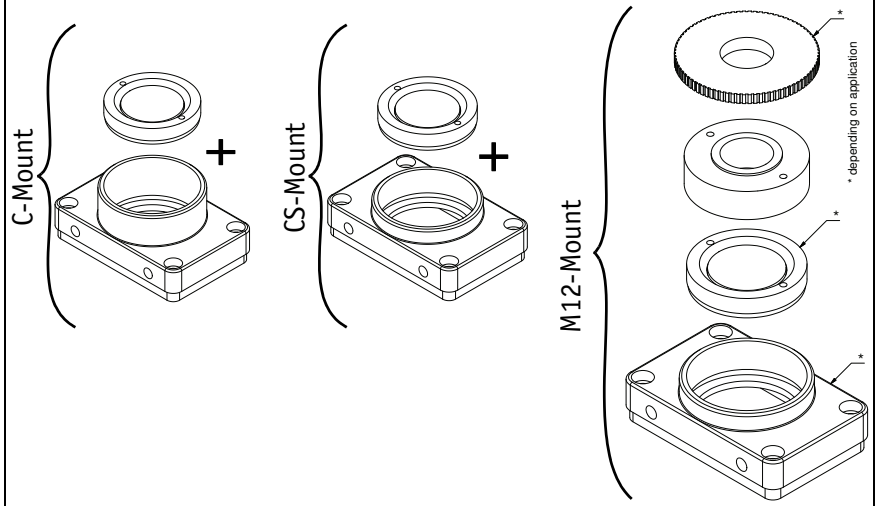
1. Select the camera type ...	2. Select the flex cable ...	3. Select the lens mount and filter ...
 Camera type is: sensor board + main board + IO board + thermal conductive film + cooling plate	 length + flex cable	 C-Mount CS-Mount M12-Mount * depending on application Choose between these 3 mounting types. Each mounting type has: • built-in filter or • protection glass
• Manta G-...._BL • Manta G-...._BL PoE (Power over Ethernet only)	• Flex cable 56 mm K7500307 • Flex cable 110 mm K7500318 • Flex cable 152 mm 1817 • Flex cable 200 mm 1824 **Info** **Flex cables are not sold separately!**	• C-Mount • CS-Mount • M12-Mount **Order each mount with one of the following built-in filters** (see *Figure 1: Spectral transmission of filters (exemplary curves)* on page 27): • ASG (protection glass) • IRC Jenofilt 217 (IR cut filter) • IRC Hoya C5000 (IR cut filter) • IRC BG39 (IR cut filter) • IRP RG715 (IR pass filter) • IRP RG830 (IR pass filter)

Table 39: Order a Manta board level camera (steps 1-3)

Order a Manta board level camera

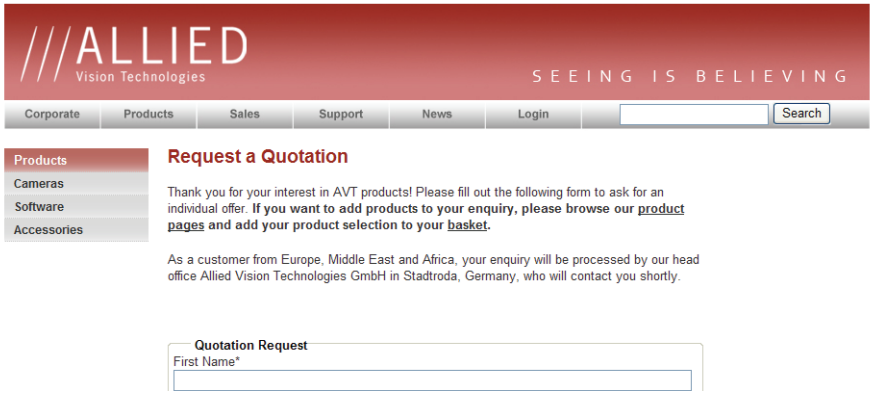
4. Select the I/O cabling ...	5. Contact AVT...
 I/O cable (13-pin to open end)	**AVT contact web site:** http://www.alliedvisiontec.com/emea/products/basket/request-a-quotation.html 
GigE cable: • AVT recommends the usage of either Cat-5e or Cat-6 cables. **I/O cable:** • I/O cable, 13-pin to open end 3.0 m K1200301 • I/O cable, 13-pin to open end 5.0 m K1200302 Please find **more cables and accessories** in our **web shop** at http://www.alliedvisiontec.com/emea/products/accessories.html	See contact information on page 1. **Order:** 1. Camera type 2. Flex cable (K-number ...) 3. Mounting type (optional) (Name) 4. I/O cable (optional) (K-number ...)

Table 40: Order a Manta board level camera (steps 4-5)